

### Block-Diagramm Sporty Family 2

This block diagram illustrates the architecture of the Sporty Family 2, a portable communication device. The system is divided into several functional sections:

- Antenna and RF Front-End:** The antenna (ANT) is connected to a Low Pass Filter (L P F) and an Antenna Switch (ANT SW, D304, D306). The signal path continues through an RF Amplifier (RF AMP, Q301) and a Band Pass Filter (B P F).
- Transmit Path:** The signal is amplified by an RF AMP (Q302) and a B P F, then passes through a 1st Mixer (1st MX, Q303) and a Filter (F301). It then goes through an IF Amplifier (IF AMP, Q304) and a 2nd Mixer & IF Amplifier (IC301, 450KHz). The signal is then filtered (450KHz) and sent to a Noise Amplifier (NOISE AMP, Q305).
- Receive Path:** The signal is received by an L P F, then passes through a TX Power Amp (Q311-Q313), a Driver (Q16), a Pre-Driver (Q315), and a TX SW & AMP (Q316). It then goes through an RX SW & AMP (Q307) and a Freq. Doubler (20.950MHz, Q306).
- Baseband and Control:** The signal is processed by a PLL IC (IC302) and a Charge Pump (Q323, Q324). It then passes through a Buffer (Q502), an R/TX SW (D308), and a TX Locking (Q322). The signal is then sent to a TX B+ (Q503) and a VCO (Q501).
- Audio and Power Management:** The signal is sent to a TX SW (Q407) and an AA/VOX Sensor. The audio path includes a Filter, MIC AMP (IC404B), AA/BB/VOX Sensor, Filter, MOD (D503), TONE DEV (VR401), and a CALL TONE FILTER. The audio is then sent to an AUDIO AMP (IC409) and an AUDIO MUTE (Q102). The power management section includes a REG (IC405), POWER SAVE (Q4), and a DC/DC CON (IC411, Q407).
- Other Components:** The diagram also shows an EXT MIC JACK (J201), C-MIC, AA/BB/VOX CONTROL (Q3), LIMITER (D406), LPF (IC406), DEV CONTROL (RV402), EEPROM (IC3), and a T-TAL (IC475MHz).

